

Abstract of the Disclosure

Improved circuitry for active matix image arrays which, in one application reduces the number of source or gate lines for a given number of pixels, and in another application extends the dynamic range of the imaging array without reducing the number of source or gate lines. Each circuit includes multiple electrodes per pixel and multiple thin film transistors for switching charge from the pixel electrodes to the data line.

1. A circuit for active matix image arrays, comprising:
a. a plurality of source lines;
b. a plurality of gate lines;
c. a plurality of pixel electrodes;
d. a plurality of thin film transistors;
e. a plurality of data lines;
f. a plurality of electrodes per pixel;
g. a plurality of thin film transistors per pixel;
h. a plurality of thin film transistors per gate line;
i. a plurality of thin film transistors per source line;
j. a plurality of thin film transistors per data line;
k. a plurality of thin film transistors per pixel electrode;
l. a plurality of thin film transistors per gate electrode;
m. a plurality of thin film transistors per source electrode;
n. a plurality of thin film transistors per data electrode;
o. a plurality of thin film transistors per pixel gate electrode;
p. a plurality of thin film transistors per pixel source electrode;
q. a plurality of thin film transistors per pixel data electrode;
r. a plurality of thin film transistors per pixel gate source electrode;
s. a plurality of thin film transistors per pixel gate data electrode;
t. a plurality of thin film transistors per pixel source data electrode;
u. a plurality of thin film transistors per pixel gate source data electrode;